The influence of time-of-day on decision fatigue in stated choice experiments

Olsen, Søren Bøye; Mørkbak, Morten Raun; Liebe, Ulf; Meyerhoff, Jürgen; Bonnichsen, Ole

Publication date:
2014

Document version
Publisher's PDF, also known as Version of record

The influence of time-of-day on decision fatigue in stated choice experiments

Søren Bøye Olsen, Morten Raun Mørkbak, Ulf Liebe, Jürgen Meyerhoff, Ole Bonnichsen

Abstract

Making choices requires a cognitive effort. As cognitive capacity is limited, this may result in decision fatigue. In the stated choice experiment literature this has inspired a string of papers investigating the potential fatigue that may occur during answering a sequence of choice sets. However, decision fatigue may occur in an additional form. Baumeister and Tierney (2011) relate decision fatigue to the mental energy that is needed to exert self-control. They find that this mental energy is depleting as the day progresses and the individual is continually faced with different situations requiring decision making. Based on this, we suspect that responses obtained in stated choice experiments may be affected by the time of day that the interview takes place. Decision fatigue, however, can be reversed by administering glucose. We thus further hypothesize that stated choices may be affected by the level of glucose in the respondent's blood during the interview. In an empirical investigation we find no evidence of a pure effect of time of day on error variance, but adjusting for anticipated relative blood sugar levels leads to a pronounced effect. This suggests that respondents with relatively low blood sugar will provide less consistent answers in stated choice experiments.